

## **REMARKS**

Claims 22-35 and 42-47 are pending. A final office action was mailed on March 26, 2009. All claims appear to be rejected; however claims 35 and 42-43 are not specifically rejected in the body of the final office action. These claims appear to be rejected according to the office action summary. The following remarks are submitted in response to the final office action.

### **I. Claim Rejections-35 U.S.C. §102**

Claims 22-34 and 47 stand rejected under 35 USC §102(b) as anticipated by, or in the alternative, 35 USC §103(a) as obvious over Yu et al. (US Pub 2002/0017612). The rejection of claims 22-34 and 47 included in the final office action is substantially the same as the rejection of these claims in view of Yu included in a non-final office action mailed on October 3, 2008. In response to the previous non-final office action, Applicant submitted remarks arguing against the Yu rejections and a declaration pursuant to CFR §1.132 by Harmannus Franciscus Maria Schoo, PhD. Applicant respectfully submits that the Examiner has improperly finally rejected the pending claims by refusing to consider the evidence included in the declaration of Dr. Schoo and refusing to give weight to applicant's functional claim limitations.

#### **A. Dr. Schoo's Declaration**

As described in detail below, the affidavit of Dr. Schoo presents compelling factual evidence that the Yu reference does not teach or suggest a light emitting diode (LED) or a device of any type which can emit light. Whether or not Yu teaches a device having a structure which can emit light is a critical fact necessary to make a well informed §102 or §103 determination with respect to the patentability of the pending claims because each rejected claim includes the following claim element:

*“a light emitting diode (LED) comprising at least one (semi)conductive electroluminescent active layer which provides for the simultaneous emission of at least*

*two intensity maxima of different wavelengths of light from the active layer and the active layer comprising at least one electroluminescent organic compound..."*

(Claim 22)

Applicant believes the Examiner is misreading the Yu reference leading him to conclude that Yu et al. does teach an LED or other structure which provides for the emission of light. For example, as stated at the bottom of page 2 of the final office action, the Examiner reasons:

*"In re claims 22,34 and 47, Yu et al discloses a detection system having at least one semiconductive electroluminescent active layer, wherein the emission spectrum of the diode exhibits at least two intensity maxima (i.e. the "emitter" with filters enable and define the "maxima." Furthermore, biasing voltage determines emission or detection functionality."*

(Final Office Action, page 2)

The Examiner elects to ignore the evidence presented by Dr. Schoo rebutting the above conclusions because the Examiner believes that the Applicant's CFR 1.132 declaration only represents an "opinion." More importantly, the Examiner incorrectly concludes that an opinion cannot establish a fact rebutting a claim rejection. In particular; at page 6 of the final office action, the Examiner states,

*"The declaration under 37 CFR 1.132 filed February 2, 2009 is insufficient to overcome the rejection of claims 22-34 and 47 based upon Yu et al (US PUB 2002/0017612) as set forth in the last Office action because: applicant has not established any facts that are commensurate with the scope of the claims and rejection. For example, in paragraph 7 of the declaration under 35 CFR 1.132, applicant states, "[i]f the Yu et al device generated light, it is my opinion that the detector would not be functional." However, since it is applicant's opinion, no fact has been established that the prior cannot generate light. Thus, the Yu et al device is still considered to be capable of generating light and the claimed invention is not patentably distinguishable over the Yu et al device."*

(Final Office Action, page 6)

The examiner's refusal to consider Dr. Schoo's declaration is a fundamentally flawed position. As an initial matter Applicant notes that it is mandatory that the Examiner fully consider Applicant's rebuttal evidence. See for example the MPEP §2145 where it is stated, "Office personal should consider all rebuttal arguments and evidence presented by Applicant."

This requirement set forth in the MPEP is based upon numerous Federal Circuit cases including *In re Piasecki*, 745 F. 2nd 1468, 223 USPQ 785 (Fed. Cir. 1984) and *In re Soni*, 54 F. 3rd 746, 34 USPQ 2nd 1684 (Fed. Cir. 1995).

To the extent Dr. Schoo's declaration does set forth expert opinion evidence, the Examiner must still consider, evaluate and apply this opinion evidence to the claim rejection determination. The relevant rule of law with respect to this issue is succinctly stated by the Federal Circuit in *Ashland Oil, Inc. v. Delta Resins* 776 F. 2nd 281, 227 USPQ 657 (Fed. Cir. 1985) where it was held with respect to §103 patentability matters:

*“Opinion testimony rendered by an expert must be given consideration, and while not controlling is generally entitled to some weight. See FED. R. EVID. 701-704... While the opinion testimony of a party having a direct interest in the pending litigation is less persuasive than opinion testimony by a disinterested party, it cannot be disregarded for that reason alone and may be relied upon when sufficiently convincing.”*

The foregoing rule of law has been affirmed several times by the Federal Circuit. For example, the Federal Circuit considered the identical issue as presented herein in the case of *In re Alton* 76 F.3d 1168, 37 USPQ 2nd 1578 (Fed. Cir. 1996). In *Alton*, the Federal Circuit reviewed a patent prosecution where the Examiner also chose to ignore a declaration because he believed the declaration offered only “opinion” evidence, rather than “factual” evidence. The Federal Circuit noted,

*“Dr. Wall’s use of the words ‘it is my opinion’ to preface what someone of ordinary skill in the art would have known does not transform the factual statements contained in the declaration into opinion testimony. Consequently, the Examiner’s dismissal of the declaration on the grounds that ‘little weight is given an opinion affidavit on the ultimate legal question at issue’ was error... in any event we are aware of no reason why opinion evidence relating to a fact issue should not be considered by an examiner.”*

(*Alton* at 1175 and footnote 10).

Based upon the foregoing law as set forth by the Federal Circuit, Applicant submits that the Examiner’s failure to consider the affidavit of Dr. Schoo was erroneous as matter of law and resulted in an improper final rejection of all claims.

Applicant respectfully points out that Dr. Schoo’s *Curriculum Vitae* is attached to the affidavit as Exhibit A. Dr. Schoo’s professional and academic credentials in the relevant fields of study are impeccable. Dr. Schoo has published over 90 journal articles; he has been granted

issuance of more than 30 patents, and he has been invited to speak before groups of scientists on more than 60 occasions. Although the Examiner does not deny the authority of Dr. Schoo's credentials, Applicant submits that the evidence presented by Dr. Schoo as an expert in the field must be given great weight.

As noted above, the affidavit of Dr. Schoo presents compelling factual evidence that the Yu reference does not teach or suggest a light emitting diode (LED) or a device of any type having light emitting structures. No prior art reference can anticipate claim 22 unless said reference teaches an LED as claimed. Furthermore, an obviousness rejection of claim 22 is inappropriate unless the cited reference(s) teach or suggest an LED as claimed. Applicant submits that the Schoo affidavit proves the rejections of all claims in view of Yu et al. are inappropriate for at least the following reasons:

1. The photodetector of Yu is not an LED. (Paragraph 3 of the Schoo declaration.)
2. The organic active layer of Yu is not inherently capable of generating light.

(Paragraph 5 of the Schoo declaration.)

3. If the Yu device generated light, it would be inoperable. (Paragraph 7 of the Schoo declaration.)

4. Yu does not disclose an LED at all. (Paragraph 9 of the Schoo declaration.)

Other facts which relate to the various dependent claims are also included in the Schoo affidavit, none of which have been considered by the examiner.

## **B. The Functional Claim Limitations**

In lines 1-2 and the second paragraph of page 3 of the final office action, the Examiner argues that the following recitation of Claim 22, "*...provides for the simultaneous emission of two intensity maxima of different wavelengths of lights from the active layer...*" merely specifies an "intended use" and thus may be treated as non-limiting. Applicant respectfully disagrees. The intended use of the claimed device is appropriately contained in the preamble of Claim 22. The use of the device is as a "detection system." The recited functional limitation concerning the simultaneous emission of at least two intensity maxima at different wavelengths of light is not a mere "intended use." On the contrary, this recitation is an

appropriate functional limitation which properly limits the scope of all claims. For example, a detector having an LED which produces light having only one intensity maximum would clearly fall outside of the scope of Claim 22 and the claims which depend therefrom.

Functional language such as employed in Claim 22 limiting the LED element is an appropriate additional limitation in a claim. See *K-2 Corp. v. Salomon S.A.* 191 F.3d 1356, 1636, 52 USPQ2d 1001, 1004 (Fed. Cir. 1999). See also MPEP § 2173.05(g) where it is stated:

*“There is nothing inherently wrong with defining some part of an invention in functional terms. Functional language does not, in and of itself, render a claim improper. In re Swinehart, 439 F.2d 210, 169 USPQ 226 (CCPA 1971).*

*A functional limitation must be evaluated and considered, just like any other limitation of the claim, for what it fairly conveys to a person of ordinary skill in the pertinent art in the context in which it is used. A functional limitation is often used in association with an element, ingredient, or step of a process to define a particular capability or purpose that is served by the recited element, ingredient or step.”*

Accordingly, applicant respectfully submits that the limitation “provides for the simultaneous emission of at least two intensity maxima of different wavelengths of light from the active layer” is a proper functional limitation on claim scope which must be considered by the Examiner.

The Examiner further states that applicant’s functional language is treated as non-limiting since, “it has been held that in device claims the device must distinguish from the prior art in terms of structure rather than function.” The Examiner cites *In re Schreiber*, 128 F.3d 143, 1477-78, 44 USPQ 2nd 1429, 1431-32 (Fed. Cir. 1997) to support this proposition. Applicant respectfully submits that the Examiner’s reliance on *Schreiber* is incorrect in this case. In the *Schreiber* matter, the cited prior art disclosed structure identical to the *Schreiber* claim. In particular, the cited prior art disclosed a “dispensing top” that has a “generally conical shape and opening at each end.” The *Schreiber* appellant admitted the prior art disclosed the same structure but he argued the prior art did not disclose that the structure could be used to dispense popcorn from an open ended popcorn container. Thus, the *Schreiber* appellant tried to distinguish an identical

apparatus by stating that the claimed use (dispensing popcorn) was not recited in the prior art.

The rule of law supporting the *Schreiber* conclusion is clearly inapplicable in the present case. Applicant's functional language concerns an LED element, which must by definition emit light and as claimed: "provide for the simultaneous emission of at least two intensity maxima of different wavelengths of light from the active layer." As detailed in paragraphs 3-14 of Dr. Schoo's Declaration, the structure relied upon by the Examiner from Yu et al. is not an LED at all and is not capable of emitting any light whatsoever, much less light having two intensity maxima.

Interestingly, the examiner cites *In re Casey* in the second paragraph of page 3 of the office action for the proposition, "If the prior art structure is capable of performing the intended use then it meets the claim." In the present matter, the Yu device can not function "in the same manner." The Yu device can not emit light of any type, much less light having two intensity maxima. As described above and in the Declaration of Dr. Schoo, the Yu et al. apparatus can only generate current in response to light from an external source. Accordingly, Applicant respectfully submits that two firm conclusions may be drawn:

a. The element of Claim 22 stating that the recited LED, "provides for the simultaneous emission of at least two intensity maxima of different wavelengths of light from the active layer," is an appropriate functional limitation; and

b. The Yu et al. reference does not teach or suggest any light emitting structure whatsoever, in particular, the Yu et al. reference does not teach or suggest the light emitting structure of Claim 22 which, "provides for the simultaneous emission of two intensity maxima of different wavelengths of lights from the active layer."

At pages 4-5 of the final Office Action, the Examiner sets forth certain additional reasons why dependent Claims 23-33 are anticipated by Yu et al. In particular, the Examiner refuses to accord proper limiting weight to the functional language of Claims 25 and 26. Applicant respectfully submits that Claims 25 and 26 are allowable for the reasons discussed in detail above.

The Examiner also indicates with respect to Claims 29-33 that Yu et al. shows the emission of at least two intensity maxima and the differences between them. The Examiner cites Figures 15a-15c of the Yu reference in support of his position. As described in detail in the Schoo Declaration, Yu does not disclose or suggest a device which is capable of emitting light. Therefore, it is impossible that Yu shows the emission of at least two intensity maxima. Furthermore, as is detailed in paragraphs 12-14 of the Declaration, neither Figure 15a, 15b or 15c of the Yu reference shows emission spectra. On the contrary, Figures 15a-b shows the spectral response of a photodiode when illuminated by an external light source. In the case of Figure 15c, the transmittance spectra of selected pixels are illustrated. Applicant respectfully submits that the figures relied upon by the Examiner fail to show any emission characteristics whatsoever.

## **II. Claim Rejections 35 USC §103(a)**

Claims 44-46 stand rejected under II. Claim Rejections 35 USC §103(a) as being obvious over Yu in view of Dickert *et. al.* Claims 44-46 depend from Claim 22 and are allowable for the reasons set forth in detail above.

## **III. Conclusion**

Applicant believes that the pending claims are in condition for allowance. If it would be helpful to obtain favorable consideration of this case, the Examiner is encouraged to call and discuss this case with the undersigned.

This constitutes a request for any needed extension of time and an authorization to charge all fees therefore to deposit account No. 19-5117, if not otherwise specifically requested. The undersigned hereby authorizes the charge of any fees created by the filing of this document or any deficiency of fees submitted herewith to be charged to deposit account No. 19-5117.

Respectfully submitted,

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